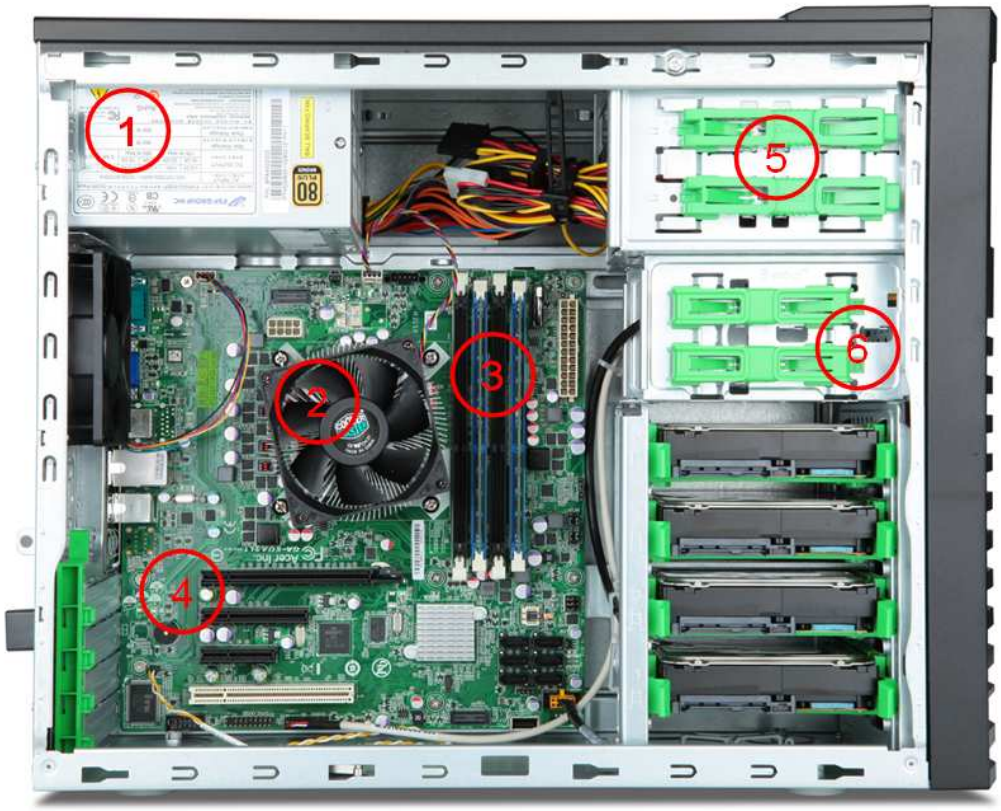
Acer AT110 F2 Specifications

Product overview
The AT110 F2 delivers true server-class features and expandability along with best price-performance technology to assure the success of your small-sized business. This single-socket tower server also features an 80 PLUS® efficient power supply that saves energy while maintaining full productivity.

Internal view



1 450 W 80 PLUS® bronze-level efficient fixed power supply
2 Intel® Xeon® E3 series processor
3 4 x DDR3 ECC unbuffered DIMMs
4 3 x PCIe & 1 PCI expansion slots
5 2 x 5.25” media expansion bays
6 4 x tool-less fixed hard drive bays

Rear view

Front View

Rear I/O

1 6 x USB ports

2 Gigabit LAN port (RJ-45)

3 Video port

4 Serial port

What's New

- Intel® Xeon® E3-1200 series processors
- Standard 450 W 80 PLUS® bronze-level fixed power supply

Product Specifications

Processors and Chipset

- Intel® Xeon® E3-1200 series processors
- Chipset: Intel® C202

Memory

- Memory capacity:
  - Unbufferred DIMM: 1, 2, 4 GB
- Maximum capacity: up to 16 GB unbuffered DIMMs when fully populated with 2 DIMMs per channel in 4 slots

Network Controllers

- Integrated single-port Intel® 82579LM Gigabit Ethernet

Storage
- Hard disk form factor: 3.5”
- Type: SAS/ SATA
- 3.5” Maximum capacity:
  - Up to 8 TB SATA HDD (2 TB 3.5" x 4 HDDs)
  - Up to 2.4 TB SAS (600 GB 3.5” x 4 HDDs)

Storage Controllers
- Intel® C202 onboard storage controller
- Optional PCIe® 4-port SAS RAID card

Expansion slots
- 1 x PCIe x16
- 1 x PCIe x8
- 1 x PCIe x4
- 1 x PCI

Management
- System LAN LEDs, System Health LED

Deployment/Serviceability
- Acer Smart Setup
- BIOS Update Tool

Operating Systems
- Windows Server® 2008
- Windows Server 2008 R2
- Windows Server 2003
- Red Hat Enterprise Linux 6
- SuSE Linux Enterprise Server 11 SP1

Input/output interface

Front
- Two USB ports
- Power/off button
- LED indicators: power, HDD activity, LAN

Rear
- 6 x USB 2.0 ports
- Serial port
- Video port
- Gigabit LAN port

Optical drive
- Full-height SuperMulti drive

Chassis/Form Factor
- mATX tower

Power Supply
- 450 W 80 PLUS® bronze-level efficient fixed power supply

Regulatory Compliant Standards

- Energy Star® compliant

EMC

- FCC (Class B)
- CE (Class B)
- BSMI (Class B)

Safety

- UL/cUL
- CB
- Nemko/GS

Environmental Specifications

Dimensions	180(W) x 406(D) x 374(H) mm (7.1(W) x 16(D) x 14.7(H) inches)	
Weight	Maximum	12.4 kg (27.3 lbs)
	Minimum (includes a single HDD, CPU and RAM, and PSU)	10.2 kg (22.4 lbs)
System inlet temperature	Operating	5°- 40°C (41°- 104°F)
	Non-operating	-20°- 60°C (-4°to 140°F)
Relative humidity	Operating	30 ~ 80%
	Non-operating	5 ~ 95%
Acoustics	Idle	
	LWAd	5.2 BA
	LpAm	34 dBA
	Operating	
	LWAd	5.7 BA
	LpAm	40 dBA
Power	Range line voltage	90~135 VAC
		180~264 VAC
	Rated input current	3.5 A (at 100 ~ 127 VAC) 2 A (at 200 ~ 240 VAC)
	Rated input frequency	50 ~ 60 Hz
	Rated input power	450 W
	Supplier to propose power budget for PSU spec setting	
	Fixed 450W Bronze level high-efficiency power supply.	
BTU rating	1535 BTU/hr	

Technical specifications

PCIe® specifications

The primary I/O bus for the main board is PCIe Gen2. The following table lists the characteristics of the PCI-E bus segments. Details about each bus segment follow the table.

NOTE: The signaling bit rate of PCI Express is 2.5Gbit/s one direction per lane for Gen 1 and 5.0Gbit/s one direction per lane for Gen 2.

Expansion slot	Number	Type	Bus width[1]	Voltage	Connector	Location	Length
PCIe x16	1	PCIe Gen2	x16	3.3V	x16	Onboard	Full height
PCIe x8	1	PCIe Gen2	x4	3.3V	x8	Onboard	Full height
PCIe x4	1	PCIe Gen2	x2	3.3V	x4	Onboard	Full height
PCI	1	PCI	32 bit	3.3V	PCI	Onboard	Full height

NOTE:

1. Indicates the number of physical electrical lanes running to a PCIe® connector.

2. Default bus assignment (in decimal). Inserting cards with PCI™ bridges may alter the actual bus assignment number.

3. Slots are enumerated differently based on the operating system. Microsoft® operating systems enumerate Device ID by bus starting from the lowest bus to the highest.

Onboard storage specifications

Item	Description
Controller	Intel C202 onboard controller
Simultaneous drive transfer channels	6 onboard SATA ports
Max throughput per channel	3 Gb/s
Data transfer method	• Non-RAID mode • RAID mode
Drive type supported	Serial ATA
RAID levels support	• RAID 0, 1, 10, 5 (Intel software RAID) • RAID 0, 1, 10 (LSI software RAID) **NOTE**: Intel software RAID only supports Windows OS
RAID function support	LSI software RAID available about 2011 Q1 • Supports multiple logical volumes • Setup through ROM based Array Configuration Utility Installation scripting support **NOTE:** This controller does not support hot plug or LED functions
RAID OS support	• Windows Server® 2008 • Windows Server 2008 R2 • Windows Server 2003 • Red Hat Enterprise Linux 6

Additional features	• SuSE Linux Enterprise Server 11 • NCQ (Native Command Queuing) • AHCI (Advanced Host Controller Interface)

Onboard LAN specifications

Item	Description
Controller	Intel PHY 82579LM
Port number	Single port
Network interface	10Base-T / 100Base-TX / 1000Base-T
Compatibility standards	• IEEE 802.3 Ethernet interface for 10BASE-T • IEEE 802.3ab Ethernet interface for 1000BASE-T • IEEE 802.3u Ethernet interface for 100BASE-TX
Remote boot functionality	Support PXE, iSCSI boot
Connector	RJ-45
Supported cable type	CAT 5e wire

Memory specifications and population

Supported memory types	• Unbuffered DDR3 1066 / 1333 MHz **NOTE:** Acer does not qualify mixed memory configurations of memory type, capacity or make.
Population	Acer's validated memory populations are listed below. **NOTE**: Support for 8 GB DIMMs may vary by regional availability.

Capacity	DIMM1A	DIMM1B	DIMM2A	DIMM2B
4 GB	2 GB		2 GB	
8 GB	2 GB	2 GB	2 GB	2 GB
4 GB	4 GB			
8 GB	4 GB		4 GB	
16 GB	4 GB	4 GB	4 GB	4 GB
8 GB	8 GB			
16 GB	8 GB		8 GB	
32 GB	8 GB	8 GB	8 GB	8 GB

Power specifications

450 W Power Supply							
Operational Input Voltage Range (Vrms)	100 to 240						
Frequency Range (Nominal) (Hz)	50 / 60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Max. Rated Output Wattage	450.14	450.86	449.44	449.35	448.32	448.21	448.18
Nominal Input Current (A rms)	5.6	4.59	2.69	2.58	2.44	2.33	2.24
Max. Rated Input Wattage Rating	558.16	547.55	528.8	527.57	526.11	525.29	524.23
Max. Rated VA (Volt-Amp)	560.28	549.87	538	536.66	536.87	535.87	537.66
Efficiency (%) at Max. Rated Output Wattage	80.65	82.34	84.99	85.17	85.02	85.32	85.49
Power Factor	0.996	0.996	0.982	0.982	0.979	0.979	0.974
Leakage Current (mA)	0.23	0.28	0.38	0.39	0.42	0.44	0.46
Max. Inrush Current (A peak)	46.2	55.5	59	62	63.5	64	64.5
Max. Inrush Current Duration (ms)	0.86	0.98	1.82	1.86	2.18	2.14	2.22
Max. British Thermal Unit Rating (BTU/hr)	1912	1876	1836	1831	1832	1828	1835

Acer server software utilities

Smart Setup 2.0	Easy deployment via the latest version of Acer's Smart Setup. Smart Setup is available both in box as a driver packed installation DVD or a downloadable file to be put into a USB 2.0 device, and eases the deployment of Acer servers for any certified OS. Through its unique interface, users may select to have all the correct drivers be pre-deployed for the OS of their choosing, as well as setup hardware RAID devices, BMC settings (where available), and even clone the pre-settings to a bootable USB device to ease mass server deployments.

Available options

Processors

Intel® Xeon® E3-1280 (4 core, 3.5 GHz, 95W)

Intel® Xeon® E3-1270 (4 core, 3.4 GHz, 80W)

Intel® Xeon® E3-1240 (4 core, 3.3 GHz, 80W)

Intel® Xeon® E3-1230 (4 core 3.2 GHz, 80W)

Intel® Xeon® E3-1220 (4 core, 3.1 GHz, 80W)

Intel® Xeon® E3-1260L (4 core, 2.4 GHz, 45W)

Intel® Xeon® E3-1220L (2 core, 2.2GHz, 20W)

Intel® Core™ i3-2120 (2 core, 3.3 GHz, 65W)

Intel® Core™ i3-2100 (2 core, 3.1 GHz, 65W)

Memory

Memory type	Unbuffered DDR3 ECC memory
Capacities	1/2/4 GB DIMMs
DIMM number	4
Max memory	16 GB

Hard drives

Type	Interface, bandwidth	Capacities
Consumer SATA	3 Gb/s	320 GB
		500 GB
		1 TB
Enterprise SAS	6 Gb/s	300 GB
NOTE: SAS drives require an add-on RAID card		450 GB
		600 GB

Optical drives

DVD-ROM

SuperMulti (DVD ± RW)

RAID cards

Model	Port number	RAID support
LSI® MegaRAID SAS 9240-4i	4 internal ports	0, 1, 5, 10

Ethernet network cards

Model	Port number	Bandwidth
Intel® Gigabit CT desktop adapter	2	10/100/1000 Mbps

Tape Backup Unit (TBU)

Model	Tape capacity	Form factor
DAT72 SATA/USB TBU	36 GB	Internal 5.25” half-height
	72 GB	
DAT160 USB TBU	160 GB	Internal 5.25” half-height

TPM module

TPM module with STMicro chip

Service and support

Acer Servers offer a comprehensive service suite to take care of daily IT needs. Users can select the 1-year standard warranty or choose extended warranties and services.

In a continuing effort to improve the quality of our products, information in this document is subject to change without notice. Images shown are only representations of some of the configurations available for this model. Availability may vary depending on region.

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NOTE: Extension warranty services may vary by country. Please contact Acer authorized resellers for more information.

Acer Standard Server Models	**Part Number**
Acer AT110 Models	
Acer AT110 F2 Intel Core i3 2100 (2 Cores, 3.1GHz, 3M), 1x2GB Unbuff DDR3, 1x500GB 7.2K SATA, DVD ROM, 1xGBit LAN onboard, 450W Fixed 80+ PSU, US Power Cable, Acer Smart Setup, Optical USB Mouse, USB Keyboard	TT.R7G00.001
Acer AT110 F2 Intel Xeon E3 1220 (4 Cores, 3.1GHz, 8M), 1x2GB Unbuff DDR3, 1x500GB 7.2K SATA, DVD ROM, 1xGBit LAN onboard, 450W Fixed 80+ PSU, US Power Cable, Acer Smart Setup, Optical USB Mouse, USB Keyboard	TT.R7G00.002
Acer AT110 F2 Intel Xeon E3 1230 (4 Cores, 3.2 GHz, 8M), 1x2GB Unbuff DDR3, 1x500GB 7.2K SATA, DVD ROM, 1xGBit LAN onboard, 450W Fixed 80+ PSU, US Power Cable, Acer Smart Setup, Optical USB Mouse, USB Keyboard	TT.R7G00.003
Acer AT110 F2 Intel Xeon E3 1230 (4 Cores, 3.2 GHz, 8M), 2x2GB Unbuff DDR3, 1 TB 7.2K SATA, DVD ROM, 1xGBit LAN onboard, 450W Fixed 80+ PSU, US Power Cable, Acer Smart Setup, Optical USB Mouse, USB Keyboard	TT.R7G00.004
Acer Key Options	
Acer Memory	
Note: please refer to "Memory Support" Section for details on configuring memory	
Acer Unbuffered Memory	
Acer 2GB DDR3 – 1333 Unbuffered Memory Kit (1 pc.)	TC.33100.035
Acer 4GB DDR3 – 1333 Unbuffered Memory Kit (1 pc.)	TC.33100.037
Acer Storage	
Acer SATA Non-Hot Plug LFF (3.5 –Inch) Drives	
Acer 320GB 3Gb/s 7.2K 3.5-inch Entry SATA HDD Kit	TC.32700.048
Acer 500GB 3Gb/s 7.2K 3.5-inch Entry SATA HDD Kit	TC.32700.049
Acer 1TB 3Gb/s 7.2K 3.5-inch Entry SATA HDD Kit	TC.32700.052
Acer 320GB 6Gb/s 7.2K 3.5-inch Entry SATA HDD Kit	TC.32700.093
Acer 500GB 6Gb/s 7.2K 3.5-inch Entry SATA HDD Kit	TC.32700.095
Acer 1TB 6Gb/s 7.2K 3.5-inch Entry SATA HDD Kit	TC.32700.097
Acer SAS Storage Controllers	
Acer 4-port 6Gb/s SAS RAID Adapter (w/ mSAS-4SATA cable) Kit	TC.32300.030
Acer Tape Drives	
Acer 36/72GB, DAT72 (DDS Gen-5), 5.25", internal, half-height, default USB cable	TC.34000.026
Acer 160G/320G ,DAT 320, 5.25" Internal Half-Height ,Interface USB, default USB cable	TC.34000.030
Acer Additional Upgrades	
Acer Gigabit Dual Port Server LAN Adapter Kit	TC.32200.009
Acer Gigabit Single Port LAN Adapter Kit	TC.32200.011
Acer nVIDIA 405 512MB DSUB/DVI/HDMI Kit	TC.32400.001
Acer nVIDIA GT520 1GB DSUB/DVI/HDMI Kit	TC.32400.002

Acer nVIDIA Quadro 2000 1GB DVI/DP/DP Kit	TC.32400.003
Acer nVIDIA Quadro 600 1GB DVI/DP Kit	TC.32400.004
Acer Operating Systems	
Microsoft Windows Server Foundation	
Acer ROK MICROSOFT Win SVR 2008 64bit Foun R2 EN W/COA W/CD/DVD ACER 1CPU	TC.34400.039
Microsoft Windows SBS Server Standard	
Acer ROK MICROSOFT Win SBS 2008 64bit Std w/SP2 5 Clt EN W/COA W/CD/DVD ACER 1-4CPU	TC.34400.041
Acer ROK MICROSOFT Win SBS 2008 64bit Prem w/SP2 5 Clt EN W/COA W/CD/DVD ACER 1-4CPU	TC.34400.043
Acer ROK Win SBS 2011 Standard Add-on (64bit, 5Clt, EN) Kit	TC.34400.136
Acer ROK Win SBS 2011 Premium Add-on (64bit,5Clt,EN) Kit	TC.34400.138
Microsoft CAL's	
Acer Windows Server 2008 CAL EN (5 Device)	TC.34400.061
Acer Windows Server 2008 CAL EN (5 User)	TC.34400.063
Acer Windows SBS 2011 Prem CAL EN (5 Device)	TC.34400.158
Acer Windows SBS 2011 Prem CAL EN (5 User)	TC.34400.159
Acer Windows SBS 2011 Std CAL EN (5 Device)	TC.34400.160
Acer Windows SBS 2011 Std CAL EN (5 User)	TC.34400.161
Acer Services	
Acer Upgrade from 1 year Parts only to 1 year Parts/Labor/On-site Service (AT115/ AT110)	146.AD306.001
Acer Upgrade from 1 year Parts only to 3 years Parts/Labor/On-site Service (AT115/ AT110)	146.AD314.006